What is claimed is:

1. A process for conditioning water for aquatic life living in water held in an enclosed space, the process comprising the steps of:

flowing an amount of the water from the enclosed space to a first apparatus and substantially reducing the oxygen concentration of the water in the flow;

subsequently introducing the flow of water from the first apparatus to a second apparatus containing sufficient anaerobic bacteria to substantially reduce the level of nitrates in the water;

subsequently introducing the flow of water from the second apparatus to a third apparatus for changing the ph level of the water to a safe level for aquatic life: and

subsequently reintroducing the flow of water to the enclosed space.

2. The process of claim 1 wherein the first apparatus is a chamber containing a first media supporting sufficient aerobic bacteria to reduce the oxygen content in the water substantially, as the water flows through the first chamber.

3. The process of claim 2 wherein the first chamber reduces the oxygen content of the water to a level of less than 2 ppm.

4. The process of claim 2 wherein the first chamber reduces the oxygen content of the water to a level of less than 1.64 ppm.

5. The process of claim 1 wherein the second apparatus is a chamber containing a media of sulfur supporting sufficient anaerobic bacteria to reduce the nitrate content in the water substantially, as the water flows through the second chamber.

6. The process of claim 2 wherein the second apparatus is a chamber containing a media of sulfur supporting sufficient anaerobic bacteria to reduce the nitrate content in the water substantially, as the water flows through the second chamber.

7. The process of claim 6 wherein the second chamber reduces the nitrate content of the water to a level ranging from 0 to 20 ppm.

8. The process of claim 6 wherein the third apparatus is a chamber containing one or more sources of calcium.

9. The process of claim 8 further comprising the step of degassing the flow of water before it is reintroduced to the enclosed space.

10. The process of claim 8 further comprising the step of adding calcium to the water that will support invertebrate aquatic life.

11. The process of claim 6 wherein the anaerobic bacteria comprise *Thiobacilus denitrificans* bacteria.

12. The process of claim 11 where the aerobic bacteria comprise at least one bacteria chosen from *nitrosomonas* and *nitrobacter* bacteria

13. The process of claim 6 wherein the anaerobic bacteria comprise at least one bacteria chosen from *Thiobacilus denitrificans*, *Thiobacillus versutus*, *Thiobacillus thyasiris*, *Thiosphaera pantotropha*, *Paracoccus denitrificans*, and *Thiomicrospira denitrificans*.

14. The process of claim 6 further comprising the steps of flowing the water through at least two sources of calcium after the water leaves the second chamber and before the water is reintroduced to the enclosed space.

15. The process of claim 6 wherein the water is flowed from the enclosed space and reintroduced to the enclosed space at a flow rate of between 1% and 10% of the volume of water in the enclosed space.

16. The process of claim 6 wherein the water is flowed from the enclosed space and reintroduced to the enclosed space at a flow rate of between 1% to 3% of the volume of water in the enclosed space.

17. The process of claim 6 wherein the water is kept within a temperature range of 25 to 30 degrees Celsius as it flows through the second chamber.

18. The process of claim 6 wherein the structure of the second chamber is opaque and designed to minimize the application of any light to the anaerobic bacteria in the second chamber.

19. The process of claim 6 wherein the water reintroduced to the enclosed space has a pH within the range of from about 6 to about 8

20. The process of claim 6 further comprising the step of adding oxygen to the water after it flows from the second chamber and before it is reintroduced to the enclosed space.

21. The process of claim 6 wherein the third apparatus is a protein skimmer.

22. The process of claim 21 wherein the protein skimmer both raises the pH and adds oxygen to the water.

23. The process of claim 21 wherein the protein skimmer includes an enclosure for accepting a flow of water, a mixing eductor within the enclosure, and a pump for introducing a forced flow of water through the mixing eductor, the mixing eductor including a first flow path for accepting forced flow of water from the pump, a second flow path for accepting flow of water from the water within the enclosure of the protein skimmer, and a third flow path for accepting flow of gas comprising oxygen from outside the enclosure, the mixing eductor in operation mixing the water and gas within the enclosure.

24. The process of claim 6 further comprising the step of flowing the water through a degassing chamber of activated carbon after it leaves the second chamber but before it is reintroduced into the enclosed space.

25. The process of claim 24 wherein the degassing chamber contains wet activated carbon immersed in the flow of water and dry activated carbon above the flow of water.

26. The process of claim 1 wherein the third apparatus is an oxytower, wherein the oxytower includes an enclosure for accepting a flow of water, wherein the enclosure is in the has side walls that slope inward at an angle θ_{oxy} from vertical; and wherein a medium is placed on the inner surface of the sidewalls and serves as support for the growth of

algae in the oxytower, and further wherein the flow of water flows down the side walls contacts the algae in a manner which allows the algae to effectively remove contaminants from the water and raise the pH of the water.

27. The process of claim 6 further comprising the step of reducing the sulfate concentrations in the water after it leaves the second chamber and before it is reintroduced to the enclosed space.

28. The process of claim 27 wherein the step of reducing the sulfate concentrations is achieved by introducing the water to a desulfator, the desulfator including an enclosure for accepting a flow of water, wherein the enclosure contains a media on which anaerobic photosynthetic bacteria are supported, and further wherein the water flows through the enclosure while contacting the media in a manner which effectively reduces sulfate levels.

29. The process of claim 28, wherein the bacteria comprise at least one bacteria chosen from Chromatium vinossum, Thiospirillum jenense, Rhodospirillum rubrum, Rhodobacter sphaeroides, Chlorobium limicola, and Prosthecochloris aestuarii.